

CLAIMS

1. A video decoder for decoding macroblocks, said video decoder comprising:

a processor for decoding a set of parameters, said set of parameters comprising motion vectors indicating reference pixels associated with the macroblock;

a motion vector address computer for calculating addresses associated with motion vectors;

a video request manager for fetching a block of reference pixels at the addresses calculated by the motion vector address computer; and

a pixel reconstructor for reconstructing pixels from the macroblocks, the pixel reconstructor operable to reconstruct pixels from macroblocks encoded in accordance with a plurality of standards.

2. The video decoder of claim 1, wherein the plurality of standards comprises MPEG-2 and AVC.

3. The video decoder of claim 1, wherein the pixel reconstructor comprises:

a macroblock input buffer for storing the reference pixels; and

a horizontal register for storing a portion of the reference pixels.

4. The video decoder of claim 1, wherein the pixel reconstructor comprises:

a horizontal data path for outputting another portion of the reference pixels.

5. A pixel reconstructor for decoding macroblocks, said pixel reconstructor comprising:

a macroblock input buffer;

a multiplexer connected to the macroblock input buffer;

a horizontal register connected to the multiplexer; and

a horizontal data path connected in parallel to the horizontal register.

6. A pixel reconstructor of claim 5, further comprising:

a macroblock input buffer register connected to the multiplexer.

7. A pixel reconstructor of claim 6, further comprising:

another multiplexer connected to the horizontal register.

8. The pixel reconstructor of claim 7, further comprising:

a bypass path connected to the macroblock input buffer and the another multiplexer, said bypass path bypassing the multiplexer and the multiplexer input buffer register.

9. The pixel reconstructor of claim 8 to reconstruct pixels from macroblocks encoded in accordance with a plurality of standards.

10. The pixel reconstructor of claim 9, wherein the plurality of standards comprises MPEG-2 and AVC.